

Dr. R. S. Banshra = 28/11/23  
(13)

**NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR  
(H.P)**

**DEPARTMENT OF CIVIL ENGINEERING  
END SEMESTER EXAMINATION, NOVEMBER 2023  
Engineering Geology & Rock Mechanics CE-213**

Note: Attempt all questions and make illustrious diagrams wherever necessary.

Time: 3 Hrs.

MM. 50

- Q. 1 Give a detailed account of geological work of Rivers. (7)  
How important is this from civil engineering perspective?
- Q. 2 What are different types of folds? Describe their (7)  
relevance to civil engineering practices.
- Q. 3 Give a detailed account of geological considerations in (7)  
the construction of highway and bridge to minimize the  
environmental hazards.
- Q. 4 What is meant by indirect failure of a Dam? Enumerate (7)  
the criteria to be adopted for stability of Dams.
- Q. 5 What are Geological consideration for selection and (7)  
construction of different types of Tunnels?
- Q.6 a What are physical and mechanical properties of rocks? (4)  
What information we get out of them.
- b For determination of shear strength of a rock sample, (4)  
block shear test was done on a rock sample of 10 cm  
cube. Calculate the shear strength if failure occurred at a  
load of 1500 kg.
- Q. 7 Describe Q-system of classification rock mass. (7)

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